AMENDMENTS TO THE CLAIMS

1. (Currently amended) In a computer system comprising a server machine and a client machine, a text-to-speech synthesis method comprising:

~~a)~~ describing a finite number of possible acoustic units;

optimizing a compression method selected in dependence of said finite number of possible acoustic units;

compressing said finite number of possible acoustic units via said optimized compression method;

storing said finite number of possible acoustic units as compressed acoustic units in an acoustic unit database accessible to said server machine;

in said server machine, obtaining a normalized text and generating prosody data thereof;

~~b)~~ selecting from said acoustic unit database compressed acoustic units that correspond~~ing~~ to said normalized text ~~from a database accessible to said server machine, said database storing a predetermined number of possible acoustic units~~;

~~c)~~ transmitting said prosody data and said selected compressed acoustic units from said server machine to said client machine~~, wherein said compressed acoustic units are obtained by compressing said selected acoustic units using a compression method selected in dependence on said predetermined number of possible acoustic units~~; and

~~d)~~ in said client machine, decompressing said transmitted acoustic units and concatenating said ~~selected~~ decompressed acoustic units in accordance with said prosody data.

2. (Currently amended) The method of claim 1, ~~further comprising~~

~~generating prosody data corresponding to said normalized text and transmitting said prosody data from said server machine to said client machine,~~ wherein said decompressing step ~~(d) comprises~~ and said concatenating step begin before all of said selected compressed acoustic units ~~in dependence on~~ and said prosody data are received in said client machine.

3. (Currently amended) The method of claim 1 ~~wherein step (d),~~ further ~~comprises~~ comprising:

caching a number of frequently used uncompressed acoustic units in a cache memory of said client machine; and

concatenating said ~~selected~~ decompressed acoustic units with at least one ~~cached~~ of said uncompressed acoustic units~~, wherein said cached acoustic unit is cached on said client machine~~.

4. (Original) The method of claim 1, further comprising normalizing a standard text to obtain said normalized text.

5. (Currently amended) The method of claim 1, further comprising:

~~wherein said possible acoustic units are compressed possible acoustic units, and wherein said compressed acoustic units are compressed before being stored in said database~~

sending a standard text to said server machine;

in said server machine, normalizing said standard text to obtain said normalized text.

6. (Currently amended) The method of claim 1, wherein said optimizing step further comprises:

selecting parameters of said compression method utilizing a directed optimized search ~~are selected~~ to minimize the amount of data transmitted between said server machine and said client machine ~~for each possible acoustic unit~~.

7. (Currently amended) The method of claim 6, wherein ~~parameters of~~ said ~~compression method are further selected to achieve a minimum~~ optimized search is directed by an acoustic metric that measures quality ~~for each possible acoustic unit~~.

8. (Currently amended) The method of claim 1, wherein ~~steps (c) and (d) are performed simultaneously for sequential acoustic units~~ said describing step further comprises:

dividing each of said possible acoustic units into sequences of chunks of equal duration; and

describing frequency composition of each chunk with a set of parameters.

9. (Currently amended) In a computer system comprising a server machine and a client machine, a text-to-speech synthesis method comprising:

~~a)~~ in said server machine, obtaining a normalized text;

~~b)~~ selecting compressed acoustic units corresponding to said normalized text from a database storing a predetermined number of possible acoustic units that have been optimally compressed; ~~and~~

~~c)~~ transmitting said selected compressed acoustic units to ~~a~~ said client machine~~, wherein said compressed acoustic units are obtained by compressing said selected acoustic units using a compression method selected in dependence on said predetermined number of possible acoustic units~~;

in said client machine, decompressing said transmitted acoustic units; and

concatenating said decompressed acoustic units.

10. (Original) The method of claim 9, further comprising generating prosody data corresponding to said normalized text and transmitting said prosody data to said client machine.

11. (Original) The method of claim 9, further comprising normalizing a standard text to obtain said normalized text.

12. (Currently amended) The method of claim 9 wherein said ~~possible acoustic units are compressed possible acoustic units,~~ decompressing step and ~~wherein~~ said concatenating step ~~compressed acoustic units are compressed~~ begin before ~~being~~

~~stored in~~ all of said ~~database~~ selected compressed acoustic units are received in said client machine.

13. (Currently amended) The method of claim 9, further comprising:

determining a compression method in dependence of said predetermined number of possible acoustic units; and

selecting ~~wherein~~ parameters of said compression method ~~are selected~~ utilizing an optimized search directed by an acoustic metric that measures quality to minimize the amount of data transmitted to said client machine ~~for each possible acoustic unit~~ while maintaining a minimum acoustic quality for each of said possible acoustic units.

14. (Currently amended) The method of claim ~~13 wherein parameters of said compression method are~~ 9, further ~~selected to achieve a minimum quality for each possible acoustic unit~~ comprising:

caching a number of frequently used uncompressed acoustic units in a cache memory of said client machine; and

concatenating said decompressed acoustic units with at least one of said uncompressed acoustic units.

15. (Original) In a client machine, a text-to-speech synthesis method comprising:

a) receiving compressed acoustic units corresponding to a normalized text from a server machine, said compressed acoustic units being selected from a predetermined number of possible acoustic units and compressed using a compression method selected in dependence on said predetermined number of possible acoustic units;

b) decompressing said compressed acoustic units to obtain decompressed acoustic units; and

c) concatenating said decompressed acoustic units.

16. (Original) The method of claim 15, further comprising receiving prosody data corresponding to said normalized text from said server machine, wherein step (c)

comprises concatenating said decompressed acoustic units in dependence on said prosody data.

17. (Original) The method of claim 15 wherein step (c) further comprises concatenating said decompressed acoustic units with at least one cached acoustic unit.

18. (Original) The method of claim 15 further comprising, before step (a), transmitting a standard text corresponding to said normalized text to said server machine.

19. (Original) The method of claim 15 further comprising, before step (a), normalizing a standard text to obtain a normalized text, and transmitting said normalized text to said server machine.

20. (Currently amended) The method of claim 15, further comprising:

~~wherein~~ selecting parameters of said compression method ~~are selected~~ to minimize the amount of data transmitted to said client machine while maintaining a minimum acoustic quality for each of said possible acoustic unit.

21. (Currently amended) The method of claim 20, further comprising:

~~wherein~~ utilizing an optimized search directed by an acoustic metric that measures ~~parameters of~~ said ~~compression method are further selected to achieve a~~ minimum acoustic quality ~~for each possible acoustic unit~~.

22. (Currently amended) The method of claim 15 wherein steps ~~(a),~~ (b)~~,~~ and (c) ~~are performed simultaneously~~ occur before step (a) is completed.

23. (Currently amended) A text-to-speech synthesis system programmed to perform the method of claim 1, said text-to-speech synthesis system comprising:

~~a)~~ ~~a~~ said acoustic unit database ~~of predetermined acoustic units~~;

~~b) a~~ said server machine in communication with said acoustic unit database ~~for selecting ones of said acoustic units corresponding to a normalized text and for generating prosody data corresponding to said normalized text~~; and

~~c) a~~ said client machine in communication with said server machine ~~for concatenating said selected acoustic units in dependence on said prosody data; wherein said server machine transmits compressed acoustic units to said client machine, and wherein said compressed acoustic units are obtained by compressing said selected acoustic units using a compression method selected in dependence on said predetermined acoustic units~~.

24. (Currently amended) ~~The~~ A text-to-speech synthesis system programmed to perform the method of claim ~~23 wherein said client machine contains at least one cached acoustic unit~~ 9, said text-to-speech synthesis system comprising:

said acoustic unit database;

said server machine;

said client machine; and

means for enabling data transmission and communication among said acoustic unit database, said server machine, and said client machine.

25. (Currently amended) ~~The~~ A text-to-speech synthesis system programmed to perform the method of claim ~~23 wherein said server machine normalizes a standard text to obtain said normalized text~~15, said text-to-speech synthesis system comprising:

an acoustic unit database for storing said predetermined number of possible acoustic units;

said server machine in communication with said acoustic unit database;

said client machine in communication with said server machine; and

means for enabling data transmission and communication among said acoustic unit database, said server machine, and said client machine.

26. (Currently amended) The system of claim ~~23~~ 25, wherein said client machine ~~normalizes~~ further comprises:

means for normalizing a standard text to obtain said normalized text; and

~~transmits~~ means for transmitting said normalized text to said server machine.

27. (Currently amended) The system of claim ~~23~~ 25, wherein said ~~predetermined acoustic units in said database are compressed predetermined acoustic units~~ client machine further comprises:

means for receiving said compressed acoustic units;

means for decompressing said compressed acoustic units; and

means for concatenating said decompressed acoustic units.

28. (Currently amended) The system of claim ~~20~~ 25, wherein ~~parameters of said compression method are selected to minimize the amount of data transmitted between said server machine and~~ said client machine further comprises:

a cache memory for caching at least one uncompressed acoustic unit.

29. (Currently amended) The system of claim ~~28~~ 25, wherein ~~parameters of~~ said ~~compression method are further selected to achieve a minimum quality for each predetermined acoustic unit~~ server machine further comprises:

means for normalizing a standard text to obtain said normalized text, wherein said standard text is received from said client machine or a different source, or is generated by said server machine.

30. (Currently amended) A computer-readable program storage device ~~accessible by a server machine,~~ tangibly embodying a computer-executable program ~~of instructions executable by said server machine to perform method steps for a~~ implementing the text-to-speech synthesis method of claim 1, ~~said method steps comprising:~~

~~a) obtaining a normalized text;~~

~~b) selecting acoustic units corresponding to said normalized text from a database storing a predetermined number of possible acoustic units; and~~

~~c) transmitting compressed acoustic units to a client machine, wherein said compressed acoustic units are obtained by compressing said selected acoustic units using a compression method selected in dependence on said predetermined number of possible acoustic units~~.

31. (Currently amended) ~~The device~~ A computer-readable medium storing a computer-executable program implementing the text-to-speech synthesis method of claim ~~30 wherein said method steps further comprise generating prosody data corresponding to said normalized text and transmitting said prosody data to said client machine~~ 9.

32. (Currently amended) ~~The device~~ A computer-readable medium storing a computer-executable program implementing the text-to-speech synthesis method of claim ~~30 wherein said method steps further comprise normalizing a standard text to obtain said normalized text~~ 15.

33. (Currently amended) ~~The device~~ A computer-readable medium storing a computer-executable program implementing the text-to-speech synthesis method of claim ~~30 wherein said possible acoustic units are compressed possible acoustic units, and wherein said compressed acoustic units are compressed before being stored in said database~~ 19.

34. (Currently amended) ~~The device~~ A computer-readable medium storing a computer-executable program implementing the text-to-speech synthesis method of claim ~~30 wherein parameters of said compression method are selected to minimize the amount of data transmitted to said client machine for each possible acoustic unit~~ 20.

35. (Currently amended) ~~The device~~ A computer-readable medium storing a computer-executable program implementing the text-to-speech synthesis method of claim ~~34~~

~~wherein parameters of said compression method are further selected to achieve a minimum quality for each possible acoustic unit~~ 21.